

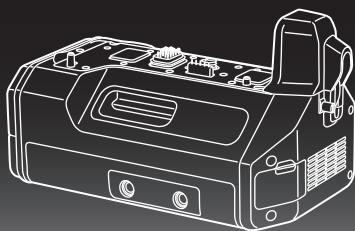
# Panasonic®

## Owner's Manual

### Interface Unit

Model No. **DMW-YAGHPP**

# LUMIX



Please read these instructions carefully before using this product, and save this manual for future use.

If you have any questions, visit:  
USA : [www.panasonic.com/support](http://www.panasonic.com/support)

PP

VQT5K48  
CH0314TY0 -FJ

## Read this first!

### **WARNING:**

- To reduce the risk of fire, do not expose this equipment to rain or moisture.
- To reduce the risk of fire, keep this equipment away from all liquids. Use and store only in locations which are not exposed to the risk of dripping or splashing liquids, and do not place any liquid containers on top of the equipment.

### **WARNING:**

Always keep accessory (terminal cap) out of the reach of babies and small children.

### **CAUTION:**

Do not remove panel covers by unscrewing.  
No user serviceable parts inside.  
Refer servicing to qualified service personnel.

### **CAUTION:**

In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.

### **CAUTION:**

To reduce the risk of fire and annoying interference, use the recommended accessories only.

### **CAUTION:**

Do not leave the unit in direct contact with the skin for long periods of time when in use.  
Low temperature burn injuries may be suffered if the high temperature parts of this unit are in direct contact with the skin for long periods of time.  
When using the equipment for long periods of time, make use of the tripod.


 indicates safety information.

**CAUTION:**

Do not lift the unit or the camera with a tripod attached.

The additional weight on the unit from the attached tripod may damage the connection between the unit and the camera, and may result in injuries.

When a tripod is attached, always carry the equipment by the tripod.

 indicates safety information.

The rating plate is on the underside of the unit.

## FCC NOTICE (USA)

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### CAUTION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the booklet "Something About Interference" available from FCC local regional offices helpful.

### FCC Warning:

To assure continued FCC emission limit compliance, follow the attached installation instructions and the user must use only shielded interface cables when connecting to host computer or peripheral devices.

Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

 indicates safety information.

The unit is exclusively for Panasonic DMC-GH4 digital camera.  
Mounting the unit to a digital camera allows you to output 4K, 3G-SDI, and HD-SDI compatible video from the SDI terminal and perform video production with higher-quality video.  
Two-channel audio input (XLR) is supported with audio level meters available.  
You can also input an external timecode to be used as a reference signal.

- When the unit is mounted on a digital camera, the electronic sound and electronic shutter sound of the digital camera are disabled.

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## ■ Handling the unit

- The unit is not splash proof or dust proof.  
Be careful not to allow sand, dust, or water to adhere or enter into the terminal area, digital camera, or this unit when attaching or removing this unit.
- This unit is not waterproof, so it cannot be used underwater.
- Do not subject the unit to strong shocks or vibration. Doing so may result in malfunction or damage.
- When the unit is mounted on the digital camera, do not use the shoulder strap supplied with the digital camera. Always hold both the digital camera and the unit while carrying.
- Keep the unit away from insecticide sprays and other volatile substances.  
If the unit is exposed to these sprays or substances, its external case may deteriorate and/or its paint may come off.
- Do not leave the unit in contact with any items made of rubber or PVC for prolonged periods of time.
- Under no circumstances should the unit be used or stored in any of the following locations since doing so may cause trouble in operation or malfunctioning:
  - In direct sunlight or on a beach in summer
  - In locations with high temperatures and humidity levels or where changes in temperature and humidity are acute
  - Where there is fire
  - Near heaters, air conditioners or humidifiers
  - Where there is vibration
  - Inside a vehicle
- Please also read the manual of your digital camera.

- Panasonic will not be liable for any direct or indirect damages or losses resulting from operation or malfunction of this product.
- The design and specifications found in this document are subject to change without notice and may differ from the actual product.
- If the unit's fan stops due to a malfunction or error and you continue to operate the unit, video output may not be performed properly.

## ■ Cleaning

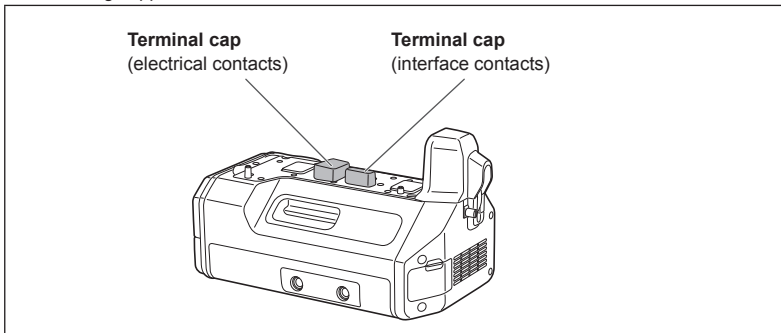
**When cleaning, wipe the unit with a dry soft cloth.**

- When the unit is soiled badly, it can be cleaned by wiping the dirt off with a well-wrung wet cloth, and then with a dry cloth.
- Do not use solvents such as benzene, thinner, alcohol, kitchen detergents, etc., to clean the unit, since they may deteriorate the external case or the coating may come off.
- When using a chemical cloth, be sure to follow the accompanying instructions.

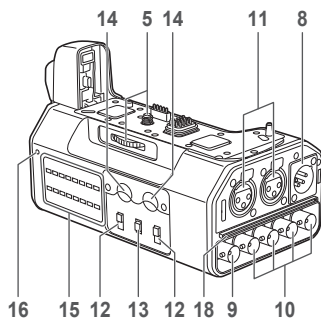
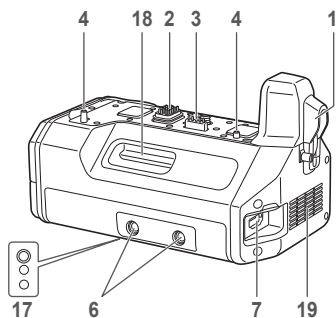
## Accessories

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- Be sure to dispose of the packaging materials in an appropriate manner after unpacking the unit.
- The following supplied accessories come attached to the unit.



# Names and Functions of Components



- 1 HDMI connection terminal**  
Connects to the digital camera's HDMI connector.
- 2 Electrical contacts**
- 3 Interface contacts**
- 4 Camera attachment pins**
- 5 Attachment screw**
- 6 Screw hole (1/4-20 UNC)**  
Attaches to PL lens compatibility adapters, etc.
- 7 HDMI terminal**  
HDMI Type A output terminal.  
(VIERA Link is not supported.)
- Use a high-speed double-shielded 4K-compatible HDMI cable (up to 2 m) that is marked with the HDMI logo when connecting to this terminal.
- 8 DC IN terminal**  
Connects to the DC power supply (battery: 12 V DC).



Pin no.	Signal
1	GND
2, 3	—
4	12 V
CASE	Frame GND

## Notes on DC power supply (battery)

- Verify that the output voltage matches the unit's voltage rating before connection.
- Use a rated output current that is equal to or higher than the unit's input current rating.
- Use a shielded cable that is less than 2 m in length for the DC cable connecting the unit to the DC power supply (battery).
- An inrush current is generated when the digital camera is turned on. An insufficient power supply capacity when the power is turned on may result in malfunction. We recommend using a DC power supply (battery) that can provide at least twice the power consumption value of the unit.

**Verify the pin positions of the output connector of the DC power supply (battery) and the unit's DC IN terminal, and be sure to connect with the correct polarities.**

**Connecting +12 V power to the GND terminal may result in fire or malfunction.**



## Names and Functions of Components (continued)

### 9 TC IN terminal (BNC)

Timecodes are input here.

Input a reference timecode to this terminal to synchronize the digital camera's timecode to that of external equipment.

- Use a 5C-FB equivalent double-shielded cable to connect to this terminal.

### 10 SDI OUT [1, 2, 3, 4] terminals (BNC)

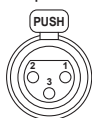
Terminals reserved for SDI output.

Resolution setting	Output terminal
C4K, 4K <1.5G-SDI Square Division>	1 to 4
FHD (1080/59.94p, 1080/50p) <3G-SDI>	1, 2 (same signal)
FHD (Other than the above), HD <1.5G-SDI>	1 to 4 (same signal)

- Use a 5C-FB equivalent double-shielded cable to connect to this terminal.
- When outputting videos that do not include timecodes (e.g., when [Rec Format] is set to [MP4] on the digital camera), a timecode will not be output.

### 11 AUDIO IN [CH1, CH2] terminals (XLR, 3-pin)

Connects to audio equipment or microphones.



Pin no.	Signal
1	GND
2	AUDIO IN (H)
3	AUDIO IN (C)

### 12 LINE / MIC / +48V switches

Switch these based on the audio equipment connected to the AUDIO IN CH1 or AUDIO IN CH2 terminal.

#### LINE:

When line input audio equipment is connected. (Input level: 0 dBu)

#### MIC:

When an external microphone is connected.

(Input level: -50 dBu)

#### +48V:

When a phantom microphone (a microphone that requires a +48 V power supply) is connected.

A power supply of +48 V will be provided to the AUDIO IN CH1 and AUDIO IN CH2 terminals.

### 13 STEREO / MONO switch

Switches the audio that is input to the AUDIO IN CH1 and AUDIO IN CH2 terminals to stereo or monaural audio.

#### STEREO:

Two-channel stereo audio.

#### MONO:

Monaural audio.

The audio that is input to the AUDIO IN CH1 terminal will also be input to AUDIO IN CH2.

### 14 REC LEVEL dials

Adjust the audio inputs to the AUDIO IN CH1 and AUDIO IN CH2 terminals individually.

### 15 Level meters

Display individual indicators for the audio input levels of the AUDIO IN CH1 and AUDIO IN CH2 terminals.

The indicators light red when the audio levels exceed 0 dB.

Adjust the REC LEVEL dials (14) to prevent the audio levels from exceeding 0 dB.

### 16 Power indicator

Lights when the connected digital camera is turned on.

### 17 Tripod attachment holes

Compatible with 1/4-20 UNC and 3/8-16 UNC screws.

Use the appropriate hole according to the diameter of the tripod screw.

- The holes have a depth of 5.5 mm. When attaching a tripod to the unit, do not tighten the screw with excessive force.

### 18 Intake vent

### 19 Exhaust vent

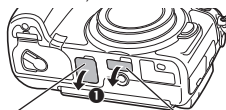
# Mounting to the Digital Camera

- Make sure that a DC power supply is not connected to the unit's DC IN terminal and that the digital camera is turned off.

(Mounting or dismounting while the power is on may result in malfunction.)

- 1** Remove the cover for the battery grip connector and cover for the interface unit connector on the digital camera, and remove the electrical contact and interface contact caps on the unit.

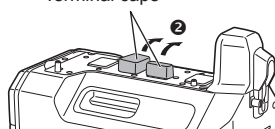
- Store the connector covers and contact caps safely to avoid loss.
- To protect the terminals, reattach the covers and caps after you finish using the unit.



Cover for the battery grip connector

Cover for the interface unit connector

Terminal caps

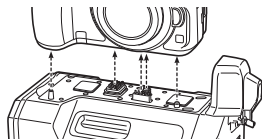


- 2** Loosen the HDMI connection terminal screw (A), and slide the HDMI connection terminal out to the side.

- Do not twist or pull the HDMI connection terminal with excessive force. Doing so may result in malfunction or damage.

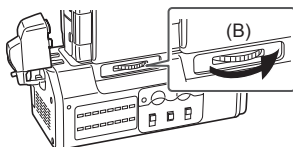


- 3** Align the attachment screw, contacts, and camera attachment pins, and attach the digital camera.



- 4** Rotate the attachment screw (B) in the direction of the arrow and tighten it securely.

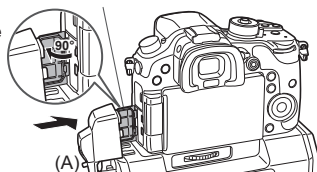
- Verify that the attachment screw is tightened securely during use.



- 5** Open the terminal cover on the digital camera, slide the HDMI connection terminal on the unit inward (toward the camera) to connect it, and tighten the HDMI connection terminal screw (A) securely.

- Open the terminal cover on the digital camera 90 degrees, and store it in the HDMI connection terminal.

Terminal cover



## ■ Dismounting from the digital camera

- Make sure that a DC power supply is not connected to the unit's DC IN terminal and that the digital camera is turned off, and then perform the mounting procedure in reverse order (disconnect the HDMI connection terminal before rotating the attachment screw (B)). Performing the procedure in the incorrect order may result in damage.

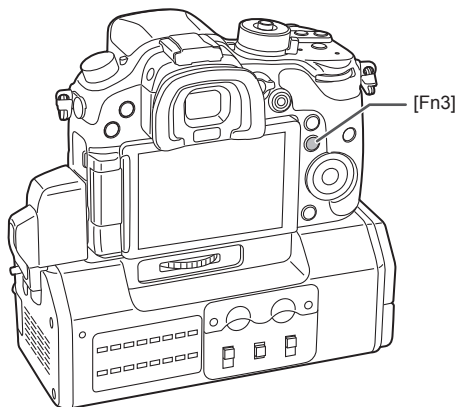
## Switching the Video Output

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When you mount the unit on a digital camera and set the camera to playback mode, videos and menus will not be displayed in the camera's monitor.

Press the [Fn3] button in such cases to switch the video output destination to the digital camera and display videos and menus in the camera's monitor.

Press the [Fn3] button again to switch the video output destination to the unit.



## Additional Menus


When the unit is mounted on the digital camera, an additional menu will appear in the digital camera's display.

Be sure to read the digital camera's manual together with this document.

- Menu settings are registered to the digital camera when you turn it off.



### Motion Picture

Interface Unit	Settings for the interface unit
Audio Input Select	Select the audio to input to the digital camera. <ul style="list-style-type: none"><li>• <b>[BODY]:</b> Input audio from the digital camera's internal microphone or from the external microphone connected to the digital camera.</li><li>• <b>[XLR]:</b> Input audio from the equipment connected to this unit's AUDIO IN [CH1, CH2] terminals. When this is selected, the [Lens Noise Cut] setting will be fixed at [OFF].</li></ul>
SDI Remote Recording	Select whether to output control information for recording start/stop to the external equipment connected to this unit's SDI OUT terminals. <ul style="list-style-type: none"><li>• <b>[ON]:</b> Enable the function.</li><li>• <b>[OFF]:</b> Disable the function.</li></ul>
LED Brightness	Specify the brightness of the level meters. <ul style="list-style-type: none"><li>• <b>[HIGH], [LOW]</b></li></ul>
3G-SDI Type	Select the type of signal that will be used when outputting 3G-SDI signals. <ul style="list-style-type: none"><li>• <b>[LEVEL A], [LEVEL B]</b></li></ul>
Low Battery Alert	Select the voltage at which to display the low battery (voltage decline) warning for the DC power battery. <ul style="list-style-type: none"><li>• <b>[11V], [12.5V], [13.5V], [15V]</b></li></ul> The  indicator will turn red and blink before the battery charge is empty. Replace the battery when the battery charge is low and "Interface Unit: Low Battery Alert" is displayed.

## Additional Menus (continued)



### Setup

#### Version Disp.

Display the firmware version of the unit that is added.


In addition, some settings in the following menu items will be restricted when the unit is mounted on the digital camera.

Setup	Motion Picture
<p><b>TV Connection</b></p> <ul style="list-style-type: none"><li>•HDMI Mode (Play):<ul style="list-style-type: none"><li>•When [AUTO] is selected, the output resolution is set automatically based on the recorded format (resolution).</li><li>•When a setting other than [AUTO] is selected, timecodes are not superimposed on SDI outputs.</li></ul></li><li>•3D Playback: Fixed at [2D].</li><li>•VIERA Link: Fixed at [OFF].</li></ul>	<p><b>HDMI Rec Output</b></p> <ul style="list-style-type: none"><li>•4K Down Convert: [AUTO] cannot be selected.</li></ul>

# Specifications

## Power source:

DC 12 V (11 V – 17 V), 1.4 A (DC 12 V)  
(including digital camera)

 indicates safety information.

## Operating temperature:

0 °C to 40 °C (32 °F to 104 °F)

## Operating humidity:

10% to 80% (non-condensing)

## Weight:

750 g (1.65 lb)

## Dimensions (W×H×D):

160 mm×64 mm×91 mm

(6-19/64 inches×2-33/64 inches×

3-37/64 inches)

(excluding protrusions and HDMI connection terminal)

## ■ Digital video

### Resolution:

Cinema4K:

4096×2160 [24p]

4K (QFHD):

3840×2160 [29.97p]

3840×2160 [25p]

3840×2160 [24p]

3840×2160 [23.98p]

FHD:

1920×1080 [59.94p] (3G-SDI Level-A/B)

1920×1080 [50p] (3G-SDI Level-A/B)

1920×1080 [59.94i]

1920×1080 [50i]

1920×1080 [24PsF]

1920×1080 [23.98PsF]

HD:

1280×720 [59.94p]

1280×720 [50p]

### Sampling:

Y:Cb:Cr = 4:2:2

### Bit depth:

8 bit / 10 bit

## ■ Digital audio

### Sampling frequency:

48 kHz (video sync)

### Quantization:

16 bit

### Headroom:

12 dB

## ■ Input / output

### TC IN:

BNC×1, 1.0 V [p-p] to 4.0 V [p-p], 10 kΩ

### AUDIO IN:

XLR (3-pin)×2, high impedance,

LINE/MIC/+48V (switchable)

LINE : 0 dBu

MIC : -50 dBu

+48V: +48 V phantom supported, -50 dBu

### SDI OUT:

BNC×4, 0.8 V [p-p], 75 Ω,

Audio output: SDI OUT 1

Embedded audio: 2 channel

Timecode output: SDI OUT 1

Embedded LTC

### HDMI:

HDMI Type A (VIERA Link not supported),

2-channel audio (linear PCM)

# Limited Warranty (ONLY FOR U.S.A.)

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## Panasonic Products Limited Warranty

### Limited Warranty Coverage (For USA Only)

If your product does not work properly because of a defect in materials or workmanship, Panasonic Corporation of North America (referred to as “the warrantor”) will, for the length of the period indicated on the chart below, which starts with the date of original purchase (“warranty period”), at its option either (a) repair your product with new or refurbished parts, (b) replace it with a new or a refurbished equivalent value product, or (c) refund your purchase price. The decision to repair, replace or refund will be made by the warrantor.

<b>Product or Part Name</b>	<b>Parts</b>	<b>Labor</b>
Interface Unit	1 Year	1 Year
All included Accessories (Except Non-Rechargeable Batteries)	90 Days	Not Applicable
Only Non-Rechargeable Batteries	10 Days	Not Applicable

During the “Labor” warranty period there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. This Limited Warranty excludes both parts and labor for non-rechargeable batteries, antennas, and cosmetic parts (cabinet). This warranty only applies to products purchased and serviced in the United States. This warranty is extended only to the original purchaser of a new product which was not sold “as is”.

## Mail-In Service--Online Repair Request

### Online Repair Request

To submit a new repair request and for quick repair status visit our Web Site at [www.panasonic.com/repair](http://www.panasonic.com/repair).

When shipping the unit, carefully pack, include all supplied accessories listed in the Owner's Manual, and send it prepaid, adequately insured and packed well in a carton box. When shipping Lithium Ion batteries please visit our Web Site at [www.panasonic.com/BatteryHandling](http://www.panasonic.com/BatteryHandling) as Panasonic is committed to providing the most up to date information. Include a letter detailing the complaint, a return address and provide a daytime phone number where you can be reached. A valid registered receipt is required under the Limited Warranty.

**IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD, THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.**

### **Limited Warranty Limits And Exclusions**

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a Factory Service Center or other Authorized Servicer, or damage that is attributable to acts of God.



**THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".**

**THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY.**

(As examples, this excludes damages for lost time, travel to and from the servicer, loss of or damage to media or images, data or other memory or recorded content. The items listed are not exclusive, but for illustration only.)

**ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

**PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.**

### ***Customer Services Directory (United States)***

**Obtain Product Information and Operating Assistance; locate your nearest Dealer or Service Center; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:**

**<http://www.panasonic.com/support>**

**or, contact us via the web at:**

**<http://www.panasonic.com/contactinfo>**

**For hearing or speech impaired TTY users, TTY: 1-877-833-8855**

### ***Accessory Purchases (United States)***

Purchase Parts, Accessories and Owner's Manual online for all Panasonic Products by visiting our Web Site at:

<http://www.pstc.panasonic.com>

Or, send your request by E-mail to:

[nppcparts@us.panasonic.com](mailto:nppcparts@us.panasonic.com)

You may also contact us directly at:

1-800-237-9080 (Fax Only)

(Monday-Friday 9am-9pm EST)

Panasonic National Parts Center

20421 84th Avenue South, Kent, WA 98032

(We accept Visa, MasterCard, Discover Card, American Express)

**For hearing or speech impaired TTY users, TTY: 1-866-605-1277**

**As of April 2014**

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Printed in China